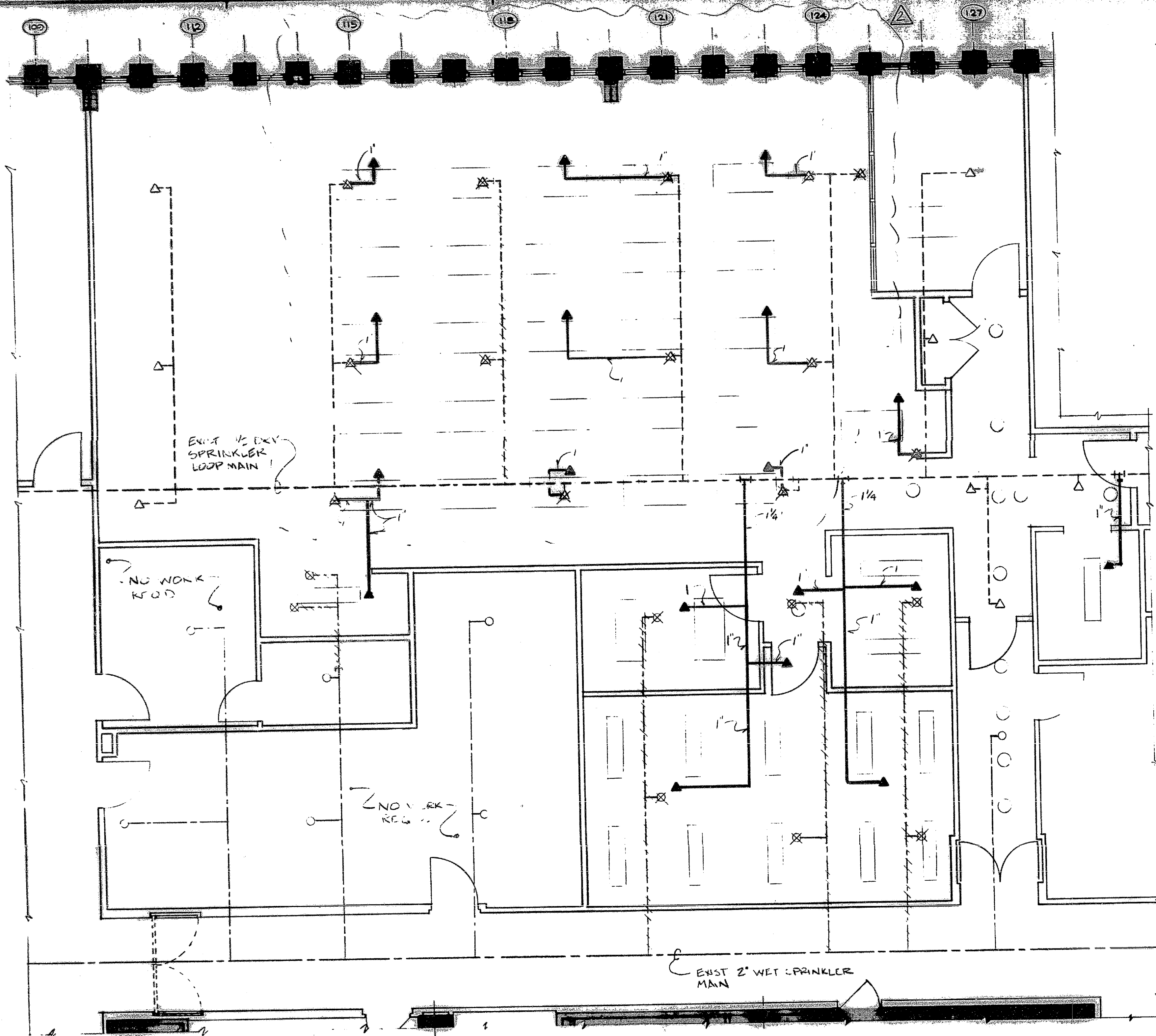


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SPRINKLER PLAN
1/4" = 1'-0"

Note:
Insulation (including jacket or facing and adhesive) shall have a flame spread rating not greater than 25, smoke developed rating 50.

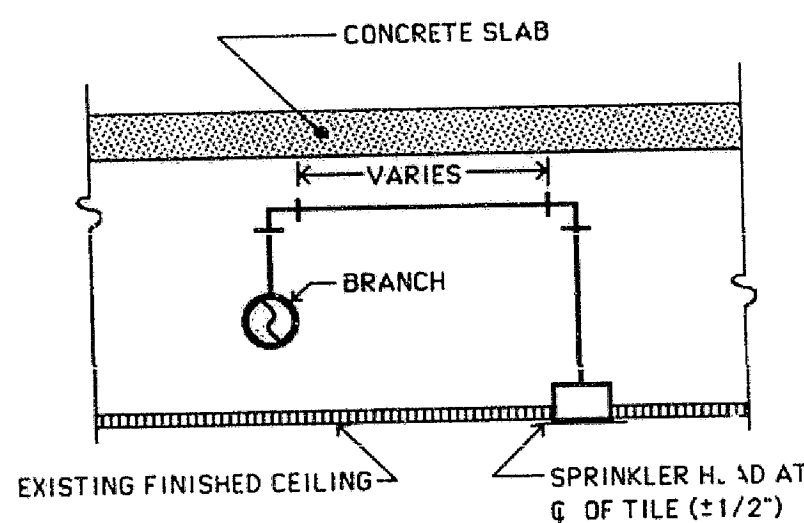
LEGEND

- ▲ RELOCATED PRE-ACTION SPRINKLER HEAD
- △ EXISTING PRE-ACTION SPRINKLER HEAD TO REMAIN
- ⊗ EXISTING PRE-ACTION SPRINKLER HEAD TO BE RELOCATED
- EXISTING WET SPRINKLER HEAD TO REMAIN
- ⊗ EXISTING WET SPRINKLER HEAD TO BE REMOVED
- NEW PRE-ACTION PIPING
- - - EXISTING PRE-ACTION PIPING
- - - EXISTING PRE-ACTION PIPING TO BE REMOVED
- - - EXISTING WET PIPING
- - - EXISTING WET PIPING TO BE REMOVED

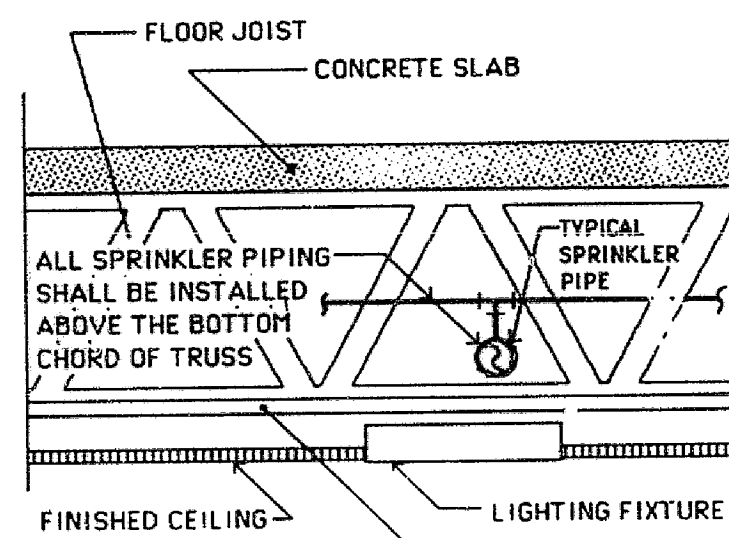
SPRINKLER SPECIFICATIONS

1. Shutdown of existing system: At the time that such closing or opening of valves and draindown becomes necessary, the Contractor shall notify the WTC Construction Division (at least 48 hours in advance) who will make the necessary arrangements. The Contractor shall keep the shutdown time to a minimum and drainage shall be to a properly connected receptacle without causing damage to other work or property.
2. Heads: Sprinkler Heads shall be Reliable Automatic Sprinkler Co., concealed type Model "G1", 1" orifice or approved equal. Polished chrome, 1/2" x 6-1/2".
3. Pipe and Fittings: Piping shall be Schedule 40, standard weight, black steel pipe, ASTM A120/53. Fittings shall be cast iron, 175 lbs. class threaded.
4. All horizontal piping parallel to and within 15'-0" of exterior walls shall be insulated with 1" fiberglass insulation.
5. Piping and fittings shall be insulated where required by the contract drawings with one inch (1") thick heavy density fiberglass pipe covering with factory applied all service jacket (ASJ), self-sealing lap and butt strips bonded with aluminum straps (2" on centers), and permolded fiberglass for fittings. Insulation shall be similar in all respects to that manufactured by Owens-Corning Fiberglass.
6. Piping shall be installed to drain back to flow control valve.
 - a) Loop main shall be above bottom chord of truss.
 - b) Branch lines shall run through bridging trusses.
7. Flushing: Before final connections and sprinkler heads are installed, all piping shall be thoroughly blown out, rodged out, and washed out at least twice in a manner as directed by the Engineer to remove all accumulation of dirt, chips or other deleterious material. Make all temporary connections and furnish all appliances required for the purpose of cleaning at no extra expense to the Authority.
8. Pipe passing through walls shall have a trim opening cut no greater than necessary for the installation of a sleeve secured therein. Sleeves shall be made of Schedule 40 galvanized steel pipe for floor slabs and 20 gauge sheet metal for framed partitions. Sleeves shall be 1/2" in diameter 1/8" over the outside length to be flush with the finished wall surface. Annular spaces between piping and sleeves or core drilled floor openings shall be packed with thermalfiber and sealed to retain the fire integrity of the walls and floors with a non-hardening compound similar and equal to Uniseal or Duxseal as manufactured by Johns-Manville Co.
9. Hangers: Install suitable clevis type hangers supported from the existing building steel framing. Drilling/anchoring systems will be permitted. Drilling only when approved by the Engineer. Use Hilti HDU anchors.

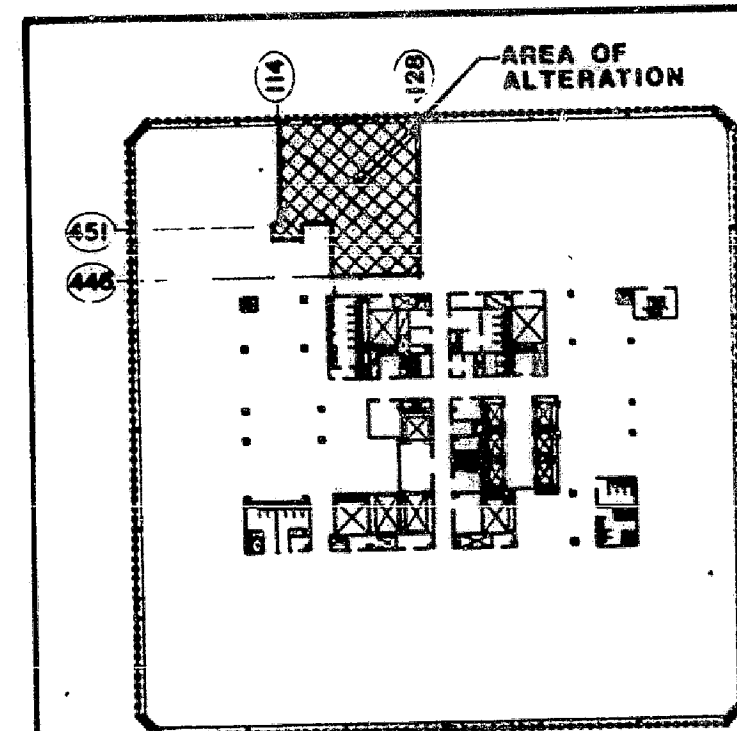
Pipe Size	Max. Hanger Spacing	Min. Rod Size
1"	8'-0" O.C.	3/8"
1-1/4" to 2"	10'-0" O.C.	3/8"
10. All piping shall be installed above the bottom chord of the trusses.
11. Test: Entire installation shall be tested hydrostatically and remain tight with no loss of pressure for a period of no less than two (2) hours against a pressure of 200 psig. Remaining portion of the floor system shall be isolated from the testing procedure.
12. Code: Entire installation shall comply with all provisions of the NYC Building Code.
13. Disturbance of structural fireproofing shall be kept in a minimum and precaution shall be observed for work above the ceiling.
14. Contractor shall submit detailed shop drawings to the Engineer for approval. No work shall commence until approval is obtained.
15. Provide identification bands on all new pre-action sprinkler piping.



DETAIL OF TYPICAL PIPING
CONNECTION TO SPRINKLER
NOT TO SCALE



DETAIL OF LOCATION OF PIPE
IN SUSPENDED CEILING
NOT TO SCALE



KEY PLAN
1/8" = 1'-0"

PHASE

P

TAA NO.



IF THIS DRAWING IS NOT 24" x 36" IT IS
A REDUCED PRINT SCALE ACCORDINGLY

JUSTIN PC ARCHITECTS

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JOHN C. WESTRICK & ASSOCIATES
CONSULTING ENGINEERS

2110 MAPLE AVE. SOUTH PLAINFIELD, N.J.
07080 201 561-4170

DATE	ISSUED TO	PR	TR
3/22/91	PORT AUTHORITY FOR APPROVAL	10	1
4/7/91	CPSC FOR RECORD CONTRACTORS RE BIDDING	5	4
5/3/91	P.A. FOR APPROVAL	10	1
6-19-91	PORT AUTHORITY	10	1
10-21-91	PA, AS BUILT DRAWING		

JOHN C. WESTRICK & ASSOCIATES
CONSULTING ENGINEERS
2110 MAPLE AVENUE
SOUTH PLAINFIELD, N.J. 07080
561-4170

AS BUILT DRAWINGS

Signature _____ Date _____

2	8-6-91	AS BUILT CONDITIONS	PE
1	4-2-91	FOR P.A. COMMENT	JW
NO	DATE	REVISION	BY

CANTOR, FITZGERALD
SECURITIES CORP.
105th FLOOR
ONE WORLD TRADE CENTER, NEW YORK, N.Y.

PROPOSED NEW TRADING ROOM
FOR INVESTMENT STRATEGIES

SPRINKLER PLAN & SPECIFICATIONS



NORTH

PROJECT NO. 91115

SCALE AS SHOWN

DRAWN BY P.E.

CHECKED BY JCW

DATE 3-20-91

DRAWING NO.

105P SP-1